

***Response to Amendment***

This office action is in response to the amendment filed on 08/24/2010.

Claims 1-16 and 18-27 are pending for examination, claims 1, 3-5, 8, 10-12, 15, 18-19 and 25 have been amended, and claim 27 has been newly added.

***Claim Objections***

Claims 3 and 10 are objected to because of the following informalities:

As to claims 3 and 10, it seems the steps (d) is part of step (c1), if so, please combined these steps together to positively specify the relationship of these two steps.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-16 and 18-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-26 recite an idea of utilizing a column function in a structure query language (SQL) environment for intended use in the preamble. However, the steps in the claim body allows the individual to specify at least one row as an argument for an abstract generalized scalar function to simulate an abstract column environment thereby. The

"allowing" phrase repeatedly recited in independent claims 1, 8 and 15 does not cause any functionality to occur in the claimed system. This is demonstrated by the absent recitation of any code or hardware for causing the claimed system to do anything. Instead, it merely ensures that there is no code or steps that prohibit a computer system from doing the recited acts.

Furthermore, not every method claim is patent-eligible under § 101. See *Bilski V. Kappos*, --- U.S. ---, 130 S. Ct. 3218, 3229-30, --- L.Ed.2d (2010) (discussing the process claims in *Gottschalk V. Benson*, 409 U.S. 63 (1972) and *Parker v. Flook*, 437 U.S. 584 (1978) being non-statutory under § 101. To Make this determination, the examiner first apply the machine-or-transformation test, which the Court has stated is a useful in determining whether a claim is a process under § 101. *Bilski*. 130 S. Ct. at 3231, 3227. The machine-or-transformation test states "an applicant may show that a process claim satisfies § 101 either by showing that his claim is tied to a particular machine, or by showing that his claim transforms an article." In re *Bilski* 545 F.3d 943, 961 (Fed. Cir. 2008) (en banc) (citation omitted), *aff'd*. *Bilski*, 130 S. Ct. The U.S. Supreme Court recently reaffirmed that "the machine-or-transformation test is a useful and important clue... for determining whether some claimed inventions are processes under § 101." *Bilski*, 130 S. Ct. at 3227.

Claim 1 reties a method for: (a) allowing a user to specify row as argument for a generalized scalar function; (b) simulating a column environment for the row; (c) performing the column function for the row to provide output. Because none of these steps is tied to any machine whether particular or otherwise, claim 1 does not satisfy the

first prong of the machine-or-transformation test. Additionally, these steps (e.g., allowing, simulating, and performing) do not transform an article into a different state or thing. Instead the examiner find these steps recite what could be broadly but reasonably constructed as abstract software code, even if it provides one output, however, the output lacks of any real world application. "Abstract software code is an idea without physical embodiment." *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 449 (2007). Thus, the examiner conclude these concepts of allowing, simulating, and performing is a non statutory process.

As to claims 2-7, 22 and 25-27 which depend on claim 1, these claims failed to resolve the issues addressed above, accordingly, they are directed to non-statutory subject matter.

As to claims 8-14 and 23, the claimed product utilizing a column function for a relational database in a SQL environment for allowing, simulating and performing the column function seemed merely provide a virtual output that failed to create any practical real world application or promote database art, thereby they are nonstatutory. In re Warmerdam, 33 F.3d at 1361 (Fed. Cir. 1994).

As to claims 15-16, 18-21 and 24, except from the nominal preamble recitations directed to a generic computer system, the body of these claims failed to tie to any specific hardware device/machine to really execute the claimed functional steps, hence

There claims are software, abstract logic or a virtual data structure per se, which does not fall within any statutory category. *In re Bilsky*.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 and 18-27, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1, 8 and 15, it is uncertain what are the links among the claimed "column function", "generalized scalar function" and "data entries being organized into a table" (i.e., column functions applied to data entries of a relational database table various from person to person, application to application and system to system, which column function is the claimed column function? In addition, what are the metes and bounds of the claimed column environment? Who performs the claimed generalized scalar function to simulating the claimed column environment? And why perform this simulation?).

As to claims 2-7 and 9-14, 16 and 18-27, these claims have the same deficient as their base claims, thereby are rejected for the same reason.

Due to the ambiguity of the claims, a sufficient prior art rejection could not be generated. The applicants are requested to restructure the claims to comply with 35 USC 112 second paragraph in order to allow the examiner to determine exactly what the applicants are attempting to claim and invent.

### ***Conclusion***

To expedite the process of re-examination, the examiner requests that all future correspondences in regard to overcoming prior art rejections or other issues set forth by the Examiner prior to the office action, that applicant should provide and link to the most specific page and line numbers of the disclosure where best support is found (see 35 U.S.C. 132).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- 1) U.S. Patent No. 6,317,738 issued to Lohman et al. which disclosed a database compiler and compilation method has special facilities for compiling a query with running and moving sequence functions in a database system.
- 2) U.S. Patent No. 6,438,538 issued to et al. which disclosed a method, apparatus and program storage device for optimizing a query in a relational database management system per an aggregate and grouping functions.

***Points of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN Y. CHEN whose telephone number is (571)272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Y Chen/  
Examiner  
Art Unit 2161

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